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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/671,916

09/24/2003

Po-Hung Yau

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03/23/2005

LAW OFFICE OF LIAUH & ASSOC.

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EXAMINER

KIM, RICHARD H

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 03/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/671,916

Applicant(s)

YAU ET AL.

Examiner

Richard H. Kim

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-12 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-8 and 12 is rejected under 35 U.S.C. 102(b) as being anticipated by Li (US 6,271,900).

Referring to claim 1, Li discloses a diffractive micro-structure color wavelength division device being a color wavelength division device having a complex two-dimensional surface phase micro-structure whereby distribution and geometric characteristic dimension of the micro-structure enable wavelength division and focus of white light of an incident backlight source, thereby resulting in wavelength division and focus on different positions of space by three different spectrum regions of wavelengths of red, green and blue (col. 3, lines 50-57). As shown in Figure 4, the distribution and geometric characteristic dimension of the microstructure enable the function of the device. If the distribution and geometric characteristic dimension of the microstructure were altered, then inherently the function would be altered.

Referring to claim 2, the limitation of the two-dimensional surface phase microstructure of the color wavelength division device has a geometric characteristic microstructure which is calculated on the basis of a diffractive theory of diffraction phenomenon and binary optics, and through an operation of phase iteration algorithm, have been considered, however, it has been recognized that '[E]ven though product-by-process claims are limited by and defined by the

Art Unit: 2871

process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior art product was made by a different process” *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). See also MPEP 2113.

Referring to claims 3 and 4, Li disclose a single unit of the color wavelength division device is capable of producing in space a respective single point wavelength division and focus of three wavelengths (col. 3, lines 54-56). Furthermore, it has been held that the recitation that an element is “capable of” performing a function is not a positive limitation but only requires the ability to so perform. It does not constitute a limitation in any patentable sense. *In re Hutchinson*, 69 USPQ 138.

Referring to claim 5, Li disclose that the color wavelength device can be arranged in the form of an array (col. 3, lines 54-56). Li discloses a “set” which implies there are more than one set per display. Therefore, multiple “sets” would comprise an array.

Referring to claim 6, Li discloses the device previously recited. Li further discloses that a plurality of the color wavelength division device are arranged in array in a liquid crystal panel to divide a light source into three different spectrum regions of wavelengths of red, green and blue, with the wavelength being focused on corresponding red, green, blue TFT subpixels of the liquid crystal panel so as to provide color which are essential to color image display (col. 3, lines 50-67; Fig. 4, ref. 428, 432, 436)

Referring to claim 7, Li discloses that the color wavelength division device is used for multi-point wavelength division and focus of multi-point wavelength division and focus of multi

Art Unit: 2871

points corresponding to arrangements of red, green, blue TFT sub-pixels of a liquid crystal panel depends on color focal distribution of the microstructure of the color wavelength division film and arrangement of TFT subpixels (col. 3, lines 50-67).

Referring to claim 8, Li discloses that the color wavelength division device can be distributed on various definition positions in space (col. 3, lines 64-66).

Referring to claim 12, as to the limitation “wherein the color wavelength division device is used in a color CCD system to replace microlens and color filter” intended use does not carry patentable weight.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Li.

Li discloses the device previously recited. Li further discloses that that the wavelength division device is made on a substrate, but does not disclose that it is made of a polymeric material with light transparency, quartz, or glass.

It would have been obvious to one having ordinary skill in the art at the time the invention was made for it to be made of a polymeric material with light transparency, quartz or glass, since quartz and glass are well known materials in the art to be used as transparent materials mainly because of its transparent qualities as well as high resistance to heat.

Art Unit: 2871

5. Claims 10 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Li in view of Ohtake et al. (US 6,512,560 B2).

Li discloses the device previously recited, but fails to disclose the device is made on one side of a substrate having a polarized function or a polarized transverse function.

Ohtake et al. discloses a device comprising a substrate having a polarized function or a polarized transverse function (Fig. 6A, ref. 260, 670).

It would have been obvious to one having ordinary skill in the art at the time the invention was made for the substrate to have a polarized function or a polarized transverse function since one would be motivated to realize the full spectrum of reflective cholesteric displays (col. 4, lines 29-31).

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard H. Kim whose telephone number is (571)272-2294. The examiner can normally be reached on 9:00-6:30 M-F.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (571)272-2293. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 2871

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Richard H Kim
Examiner
Art Unit 2871

RHK


ROBERT H. KIM
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2871